Amendments to the Specification:

Please replace the paragraph beginning on page 9, line 24 with the following rewritten paragraph:

-- (041) The free ends 41 of the carrier chains 40 describe an arcuate path as they move in response to the rotation of the magnetic field, and the velocity of the free end 41 of the carrier chain [42] 40 outside of the toning nip 34 is given by multiplying the chain length times the angular velocity of the magnetic field, plus a contribution from the velocity of the toning shell 18. The term "free end" is meant to refer to the end 41 of the carrier chain 40 opposite the end 43 in contact with the toning shell 18. For a magnetic core 20 having fourteen poles rotating at approximately 1100 RPM, the magnetic field flips approximately 14 x 1100/60 = 257 times per second. Each transition from a N pole to a S pole corresponds to a rotation of the magnetic field by 180 degrees or π radians, and the angular frequency of rotation for the magnetic field ω_{Mag} equals the number of pole transitions per second x π. In this case, for a stationary observer, $\omega_{Mag} = 806$ radians/sec. At 17.49 ips imaging member speed v_{IM} with a toning nip 34 width of approximately 0.375", each point on the imaging member 12 is exposed to at least 5 north or south magnetic poles as it passes through the toning station. Thus, under these conditions, the carrier chains 40 are formed and collapse approximately 5 times during development of a point on the image 12. --

Please replace the paragraph beginning on page 10, line 8 with the following rewritten paragraph:

-- (042) Preferably, the resulting average developer bulk velocity is substantially equal to the imaging member velocity, as set forth in co-pending United States Patent Application Serial No. 09/855,985, filed May 15, 2001 now US Patent No. 6,728,503, in the names of Stelter, Guth, Mutze, and Eck, the contents of which are hereby incorporated herein by reference. While that application addressed relative velocities of the imaging member 12 and the bulk velocity of developer 16, the present invention focuses on instantaneous values of

particle velocity that have components perpendicular to the imaging member, rather than parallel to the process direction. Therefore, for the purposes of this discussion, it will be assumed that the imaging member 12 velocity equals the average developer bulk velocity and, therefore, there is no relative motion between the imaging member 12 and the developer 16 in the process direction. When there is some such relative motion in the process direction, the average developer 16 velocity through the toning nip 34 contributes to the rate γ of pole transitions experienced by the developer 16. For a magnetic core 20 with n poles per inch, with the field from the poles appearing to a stationary observer to move at a surface velocity v_M on the toning shell 18 and countercurrent to a developer moving at velocity v_D,

$$\gamma = n \times (v_D + v_M) \quad (2)$$

and

$$\omega_{Mag} = \pi\gamma \quad (3)$$

where v_D and v_M are the magnitudes of the velocities in inches per second. If the magnetic core 20 is rotating cocurrent with the developer 16 velocity, Equation (2) would be modified to read:

$$\gamma = n \times (v_D - v_M) \quad (2')$$ --

Please replace the paragraph beginning on page 22, line 5 the following rewritten paragraph:

--(071) Numerous toners are suitable in the practice of the invention. Polyester based toners and styrene acrylate polymer based toners, for example and without limitation, as described in published United States Patent Applications 2003/0073017 now US Patent No. 6,692,880, 2003/0013032 now US Patent No. 6,797,448, 2003/0027068, 2003/0049552, and unpublished United States Patent Applications 10/460,528 - filed 6/12/2003 - "Electrophotographic Toner and Developer with Humidity Stabilty, and 10/460,514 - filed 6/12/2003 - "Electrophotographic Toner with Uniformly Dispersed Wax" may be implemented. The 6,610,451 patent is incorporated by reference as if fully set forth herein. The toner may be surface treated, with silica for example, as is well known in the art. A polymethylmethacrylate (PMMA) surface treatment may also

be implemented, for example catalogue number MP1201 available from Soken Chemical & Engineering Co., Ltd., Tokyo, Japan, and distributed by Esprix Technologies of Sarasota, Florida. The carrier particles may be ~~SrFe12O19~~ $SrFe_{12}O_{19}$ coated with polymethylmethacrylate. Volume mean diameter of 20.5 microns (sigma = 0.7 microns for ten production runs of a carrier material), measured using an Aerosizer particle sizing apparatus (TSI Incorporated of Shoreview, Minnesota). Larger diameter carrier particles can be used. A suitable carrier has a coercivity of 2050 Gauss, a saturation magnetization of 55 emu/g, and a remnance of 32 emu/g, measured using an 8kG loop on a Lake Shore Vibrating Sample Magnetometer (Lake Shore Cryotronics, Inc., of Westerville, Ohio).--

Please replace the paragraph beginning on page 23, line 20 with the following rewritten paragraph:

-- (076) In the Equilibrium Theory, mass per unit area for particle deposition on a conductive substrate is given by (Schein, 1996 Eq. 6.56),

$$\frac{M}{A}=\frac{\varepsilon_0 V}{Q/M}\frac{\nu}{\Lambda} \tag{26}$$

where M/A is mass per unit area in ~~g/cm2~~ g/cm^2, Q/M is the charge-to-mass ratio for the polymeric particle in units of C/g, ε_0 is the permittivity of free space in F/cm, V is the voltage between the substrate and the toning shell, ν is the ratio of the velocity of the development roller to the velocity of the substrate, and Λ is the dielectric distance from the applicator roller electrode to the carrier charge in cm. The parameter Λ is usually fitted to experimental data. --

Please replace the paragraph beginning on page 24, line 14 with the following rewritten paragraph:

--(080) Shell speeds of 423 RPM were used, corresponding for a 2 inch diameter shell to a surface speed of 1.125 m/sec. The spacing from the shell surface to the receiver was 30 mils, and the skive was set to 45 mils. Nap height for the developer material is approximately 48 mils. For comparison with the

Equilibrium Theory, Λ was determined by measuring mass area density with the magnetic core fixed at receiver speeds of 0.5 m/s, toner charge to mass ratio of 14.26 μC/g, and bias voltage of 1 kV. Data was taken at shell speeds of 129.1 RPM, corresponding to a surface speed 0.34 m/s , with a skive setting of 28 mils. Data was also taken at shell speeds of 423 RPM, corresponding for a 2 inch diameter shell to a surface speed of 1.125 m/sec with a skive setting of 45 mils. The spacing from the shell surface to the receiver was 30 mils for both shell speeds. For the low shell speed, low skive setting, mass area density was 10.38 ~~g/cm2~~ g/cm^2 and Λ was found to be approximately 41 microns, For the high shell speed, high skive setting, mass area density was 32.08 ~~g/cm2~~ g/cm^2 and Λ was found to be approximately 44 microns. For smaller spacings from the toning shell to the receiver, the dielectric length Λ is expected to decrease slightly.--